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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/803,248	03/09/2001	Donald Henry Willis	PU010033	7064

7590

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THOMSON multimedia Licensing Inc.  
Patent Operations  
Two Independence Way  
P.O. Box 5312  
Princeton, NJ 08543-5312

EXAMINER

ANYASO, UCHENDU O

ART UNIT

PAPER NUMBER

2675

DATE MAILED: 12/04/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/803,248	WILLIS ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Uchendu O Anyaso	2675	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 09 March 2001.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

#### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All   b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                  | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____                                    |

### DETAILED ACTION

1. Claims 1-29 are pending in this action.

#### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

3. **Claims 1-29** are rejected under 35 U.S.C. 102(e) as being anticipated by *Gadeyne et al* (U.S. Patent 6,359,663).

Regarding independent **claims 1, 11 and 21**, and for **claims 5-10, 16-20 and 25-29**, Gadeyne teaches a method of reducing artifacts in an image display by teaching the conversion or generation of a video signal so that motion artifacts which are caused by the difference in luminance response times for rise and decay are canceled out (see Abstract; column 2, lines 45-51).

Furthermore, Gadeyne teaches how a video signal for a picture is converted into different levels of luminance with different rise and fall times (column 2, lines 45-67).

Furthermore, Gadeyne teaches how to combine a slew rate limit and processing delay of a video signals in order to match the processing delays and reduce artifacts by teaching how to convert a first video signal into a second video signal so that the faster luminance response of a picture element of the first video signal is slowed down in order to match the luminance response in time and amplitude to the known slower luminance response of the same or another picture element for the opposite change of the first video signal (column 3, lines 35-42).

Regarding **claims 2** and **14**, in further discussion of claims 1 and 11, Gadeyne teaches how his invention uses gamma-correctors (35, 40) (see column 7, lines 22-45, figure 13 at 35, 40).

Regarding **claims 3** and **4**, in further discussion of claim 1, Gadeyne teaches a method of video signal conversion comprising: receiving a first video signal corresponding to a picture element of a display device; receiving a predicted present luminance value from a memory, the predicted present luminance value relating to a predicted present luminance of the picture element; converting the first video signal into a second video signal corresponding to the picture element, the second video signal being based on the first video signal and the predicted present luminance value; determining a predicted future luminance value relating to a predicted future luminance

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of the picture element, the predicted future luminance value being based on the first video signal and the predicted present luminance value; and storing the predicted future luminance value to the memory wherein the predicted future luminance value relates to an expected response of the picture element to the second video signal (column 13, lines 60 through column 14, line 11).

Also, Gadeyne teaches an algebraic circuit by teaching an adder (37) and a subtractor (36) for subtracting from the first video signal (33) a predicted present luminance (column 12, lines 19-36, figure 13 at 36, 37).

Regarding **claims 12 and 13**, in further discussion of claim 11, Gadeyne teaches storing the predicted future luminance value to the memory wherein the predicted future luminance value relates to an expected response of the picture element to the second video signal (column 13, lines 60 through column 14, line 11).

Furthermore, Gadeyne teaches how to compare different brightness levels luminance video signal to the predicted value by teaching a method of video signal conversion comprising: receiving a first video signal corresponding to a picture element of a display device; receiving a predicted present luminance value from a memory, the predicted present luminance value relating to a predicted present luminance of the picture element; converting the first video signal into a second video signal corresponding to the picture element, the second video signal being based on the first video signal and the predicted present luminance value; determining a predicted future luminance value relating to a predicted future luminance of the picture element,

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the predicted future luminance value being based on the first video signal and the predicted present luminance value; and storing the predicted future luminance value to the memory wherein the predicted future luminance value relates to an expected response of the picture element to the second video signal (column 13, lines 60 through column 14, line 11).

Also, Gadeyne teaches an algebraic circuit by teaching an adder (37) and a subtractor (36) for subtracting from the first video signal (33) a predicted present luminance (column 12, lines 19-36, figure 13 at 36, 37).

Furthermore, Gadeyne teaches a clipping circuit by teaching circuitry that removes luminance jumps and visible artifacts in a displayed image during and immediately after the movement of the image wherein conversion occurs so that the second video signal causes a change of the first video signal from a first amplitude value to a second amplitude value to be substantially equal in shape and amplitude but reversed (i.e., inverted) in slope compared to the luminance time response of the same or another picture element of the image (column 2, lines 45-67).

Also, Gadeyne teaches a first gate by teaching a subtractor (36) and second gates (37, 39) wherein a value  $\Delta$  determines how the luminance will have to change during the next correction period such that luminance would rise when  $\Delta$  is positive, fall when  $\Delta$  is negative, and remain equal when  $\Delta$  is zero (column 9, lines 1-30, figure 13 at 36-39).

Regarding **claim 15**, in further discussion of claim 11, Gadeyne teaches how to combine a slew rate limit and processing delay of a video signals in order to match the processing delays and reduce artifacts by teaching how to convert a first video signal into a second video signal so that the faster luminance response of a picture element of the first video signal is slowed down in order to match the luminance response in time and amplitude to the known slower luminance response of the same or another picture element for the opposite change of the first video signal (column 3, lines 35-42).

Regarding **claims 22-24**, in further discussion of claim 21, Gadeyne teaches how to achieve a selectable threshold value by teaching a method of video signal conversion comprising: receiving a first video signal corresponding to a picture element of a display device; receiving a predicted present luminance value from a memory, the predicted present luminance value relating to a predicted present luminance of the picture element; converting the first video signal into a second video signal corresponding to the picture element, the second video signal being based on the first video signal and the predicted present luminance value; determining a predicted future luminance value relating to a predicted future luminance of the picture element, the predicted future luminance value being based on the first video signal and the predicted present luminance value; and storing the predicted future luminance value to the memory wherein the predicted future luminance value relates to an expected response of the picture element to the second video signal (column 13, lines 60 through column 14, line 11).

Furthermore, Gadeyne teaches how his invention uses gamma-correctors (35, 40) (see column 7, lines 22-45, figure 13 at 35, 40).

Also, Gadeyne teaches how to combine a slew rate limit and processing delay of a video signals in order to match the processing delays and reduce artifacts by teaching how to convert a first video signal into a second video signal so that the faster luminance response of a picture element of the first video signal is slowed down in order to match the luminance response in time and amplitude to the known slower luminance response of the same or another picture element for the opposite change of the first video signal (column 3, lines 35-42).

### ***Conclusion***

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent 5,936,621 to *Medin et al* for a system and method for reducing flicker on a display.

U.S. Patent 4,855,831 to *Miyamoto et al* for a video signal processing apparatus.

U.S. Patent 6,347,161 to *Mancuso* for a non-linear image filter for filtering noise.

### ***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Uchendu O. Anyaso whose telephone number is (703)



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306-5934. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steve Saras, can be reached at (703) 305-9720.

**Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks

Washington, D.C. 20231

**or faxed to:**

**(703) 872-9314 (for Technology Center 2600 only)**

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.



Uchendu O. Anyaso

11/30/2002



STEVEN SARAS  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600